

Agenda Item E-3.2

39 th Argos Operations Committee meeting
Prepared by CNES
June 7th, 2005

The Argos Frequencies

1- Background

The first frequency declaration was done in the 70's by NOAA for the Argos-1 instruments embarked on the TIROS Satellites.

This declaration, compatible with all the Argos-1 and Argos-2 instruments, has been kept in this state for several years with no real status.

In the early 80's, at a CAMR, CNES presented a request for the 401-403 MHz band to be referenced as a primary band in the Earth Observation by Satellite Service. Through this new status, Argos is in position to claim in case of interferences in the band. Also, any new system which would aim to use this band needs to enter in a coordination process with Argos.

2- The Argos-B declaration

In 1996, CNES has declared the Argos-B frequencies, including the downlink @ 466 MHz in order to take into account the new Argos-Next instrument on-board ADEOS II, the Japanese satellite.

This declaration has been modified in 1998 to integrate the Argos-3 characteristics (110 kHz instead of 80 kHz on the uplink), then in 2004 for a more detailed version.

From the Launch of ADEOS II end of 2002, the Argos-B system can be considered as operational : at ITU point of view, it has been put as "In Service", this status being kept after the Satellite failure.

The Argos-B declaration covers perfectly the Argos-3 system as far as it can be considered as an Earth Observation by Satellite Service : Argos data collection and location must be for the purpose of environmental monitoring and further states that activities beyond the scope of environmental monitoring shall not exceed 5% of the Argos Data Collection System capability.

Currently, in 2005, the non-environmental activities are in the range of 1% of the Argos Data Collection System capability.

3- The Argos Downlink

This frequency at 466 MHz is referenced as "Secondary" and can be used on a non-interference basis. That means that the 466 MHz bandwidth can be used as far as it doesn't disturb any other system.

With the Argos-Next instrument on board ADEOS II, this frequency has been used over all the Earth for a 9 months period (from January 2003 to September 2003) without any claim.

In conclusion, and as it has been demonstrated during the ADEOS II functioning, the Argos downlink frequency should not disturb any other application. Nevertheless, the secondary status is uncomfortable and is a potential source of coordination process.